

## REMARKS / ARGUMENTS

In complete response to the Office Action of August 18, 2005, on the above-identified application, reconsideration is respectfully requested. Claims 1-13 and 31-44 were canceled in view Applicant's submission of July 18, 2005. Claims 14-30 are currently under examination. Claims 14, 15 and 17-30 stand rejected. Claim 14 has been amended to correct a typing error. Claim 16 was noted by the Examiner as allowable and has been rewritten in independent form. New claims 45-50 are hereby added in the current submission and are fully supported by the original specification.

### Claim Rejections Under 35 U.S.C. § 103(a):

Claims 14, 15 and 17-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,426,948 (Hyde) in view of U.S. Patent No. 6,334,328 (Brill).

The Examiner noted on page 2 of the Office Action that:

*"Hyde discloses applicant's basic inventive concept, a dry ice forming machine that expands liquid carbon dioxide to form dry ice which may be formed into blocks or pellets, substantially as claimed with the exception of using ozone during production. Brill shows contacting liquid about to be frozen to form solid blocks used for refrigerating with gaseous ozone...."*

The Examiner further noted on page 2-3 of the Office Action that:

*"It would have been obvious ... to modify the dry ice forming process of Hyde by injecting gaseous ozone into the liquid before solidification..."*

Applicants respectfully disagree. Indeed, Hyde describes a process and machine for forming dry-ice blocks or pellets using a machine that extrudes or presses the CO<sub>2</sub> into solid form. However, Brill describes "an apparatus and method for providing effective **ozonation of water** used in ice making equipment

for the production of ice cubes and for the **ozonation of ice retaining bins** and retarding the growth of microorganisms therein and in the drains of beverage dispensing equipment." (Col. 1, Lines 60-65). Brill **does not mention or claim that the resulting ice will contain ozone**. The ozone also reduces microbial growth on the water distribution tube, evaporator, and receiving tanks (Col. 6, Lines 31-34). Furthermore, Brill specifically describes the ozone as also being delivered to the ice bin, cold plate, drain, drain line, drip tray and pan (Col. 8, Lines 39-43). Brill specifically states that the water releases some of the ozone as the water cascades over the evaporator causing the ozone to fall under the force of gravity into ice bin (Col 6, Lines 35-39). In other words, **Brill teaches cleaning the water-ice machine** and not producing ozonated ice. Thus, Applicants assert that the current invention is patentable over Hyde in view of Brill because **neither Hyde or Brill teaches the production of a refrigerating product containing ozone**.

Alternatively, even if Brill supplied water ice containing ozone, **the method of providing ozone to the water of Brill is not applicable to providing ozone to the pressurized and liquefied gas of Hyde**. As described in Hyde, liquid carbon dioxide is normally transported and stores at a pressure of 300 pounds per square inch. (Col. 3, Lines 23-25). Furthermore, the CO<sub>2</sub> stream is at a pressure of above the triple point (about 69.9 psig) before flashing into the compression cylinder. Conversely, the **ozone of Brill is not under substantial pressure** because it is essentially sucked into a substantially non-pressurized water stream. The water is introduced into a reservoir via a float valve, then pumped around a circuit (Col 7, Lines 9-13). The pressure in the reservoir is at about atmospheric pressure because the reservoir is vented to the atmosphere. The ozone is pumped by the ozone generator into the low-pressure zone of the venturi, thus the venturi helps to suck the ozone into the system (Col. 6, Lines 16-22). Thus, Applicants assert that the current invention is patentable over Hyde in view of Brill because the combination of Hyde and Brill fails to suggest or teach pressurizing

ozone to sufficient levels and introduction of the ozone into a substantially pressurized liquid stream.

For the reasons described above, Applicants respectfully contend that Claims 14, 15, and 17-27 are patentable over Hyde in view of Brill.

Claims 28-30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,426,948 (Hyde) in view of U.S. Patent No. 6,167,711 (Slattery).

The Examiner noted on page 3 of the Office Action that:

*"Slattery shows contacting solid blocks used for refrigerating with gaseous ozone to keep the solid free of microbial growth..."*

The Examiner further notes that:

*"It would have been obvious...from the teaching of Slattery to modify the dry ice forming process of Hyde by injecting gaseous ozone into a solid to reduce the growth of microbes in the cooled area or substance."*

Applicants respectfully disagree. **Slattery teaches sanitizing an ice distribution system** with ozone (Col. 3, Lines 24-26). The system of Slattery is used only periodically to clean the system, and the ozone is terminated after the sanitation cycle (Col. 4, Lines 54-56 and Col. 5, Lines 5-7). In fact, Slattery **teaches away** from producing a product containing ozone because it specifically states that it is **preferable to expose the surfaces of the equipment to ozone when there is little or no ice present** (Col. 5, Lines 19-23). Furthermore, the system of Slattery is operated at low pressure, thus delivering compressed ozone is not taught. Still further, at most, the blocks in Slattery would only have ozone exposed to the surface of the blocks. Clearly, exposing the surface of a solid is very different from injecting ozone into the internals of the solid. **Neither Hyde nor Slattery teaches the entrapment of ozone in the solid**, nor a solid ice

product containing ozone. Thus, Applicants respectfully contend that Claims 28-30 are patentable over Hyde in view of Slatery.

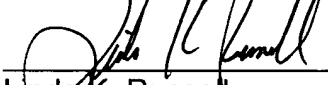
### **Allowable Subject Matter**

Applicants thank the Examiner for noting the allowability of claim 16.  
Applicants have rewritten claim 16 in independent form.

### **CONCLUSION**

It is believed that the present application now stands in condition for allowance. Early notice to this effect is earnestly solicited. Should the examiner believe a telephone call would expedite the prosecution of the application, she is invited to call Linda K. Russell at the number listed below.

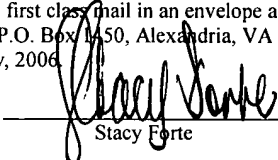
Respectfully submitted,

  
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#### **CERTIFICATE OF MAILING UNDER 37 CFR 1.8(a)**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 9<sup>th</sup> day of January, 2006.

  
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Stacy Forte